

REMARKS

Favorable reconsideration of this application, as amended, is respectfully requested.

Claim 85 has been amended to overcome the rejections under 35 U.S.C. § 102(b) based on Elliot and 35 U.S.C. § 102(e) based on Schuster. The amendment of Claim 85 also overcomes the rejections under 35 U.S.C. § 103(a) based on the same references. Claim 94 has been cancelled, and Claims 95-98 have been made dependent on Claim 93.

Claim 85 now recites, inter alia, that the reduction projection catadioptric optical system is constructed so as to provide an exit pupil having no obscuration. Drawings are submitted herewith showing that both Elliot and Schuster disclose central obscuration type optics and that the present invention has an exit pupil with no obscuration.

Elliot et al. disclose a reduction projection catadioptric optical system which forms a reduced image of a mask 28 onto a wafer. As described in column 3, lines 9-15 of Elliot et al, reflective surfaces 56 and 62 have, respectively, aperture 53 and non-reflective portion 64. An optical system having such an aperture or non-reflective portion is formed, at the central area of light flux toward a wafer, with a portion through which no light can pass as shown in the attached drawing.

Schuster discloses a reduction projection catadioptric optical system which forms a reduced image of an object O onto an image plane 61. In this system of Schuster, two concave mirrors 21 and 23 have respective central bores.

Since no light is reflected by those bores, an area through which no light passes is formed at the center of the light flux toward the wafer.

From the foregoing, it is apparent that neither Elliot nor Schuster discloses a reduction projection catadioptric optical system in which an exit pupil has no obscuration. Accordingly, Claim 85 and the claims dependent thereon should now be allowed. Since the remaining claims have been allowed, this application is believed to be allowable.

The Commissioner is hereby authorized to charge to Deposit Account No. 50-1165 any fees under 37 C.F.R. §§ 1.16 and 1.17 that may be required by this paper and to credit any overpayment to that Account. If any extension of time is required in connection with the filing of this paper and has not been requested separately, such extension is hereby requested.

Respectfully submitted,

NHS:lmb

Miles & Stockbridge P.C.
1751 Pinnacle Drive
Suite 500
McLean, Virginia 22102
(703) 903-9000

December 29, 2004

By: Nelson H. Shapiro
Nelson H. Shapiro
Reg. No. 17,095